

Application No.: 09/752,123

Docket No.: JCLA6706

In The Claims:

Claim 1. (Canceled)

Claim 2. (Currently Amended) An apparatus for coprocessor data access control, comprising

a central processing unit, for executing central processing unit instructions to perform data processing, wherein the central processing unit instructions include[[s]] a plurality of coprocessor memory access instructions;

a memory unit, coupled to the central processing unit, for storing data words; and

a plurality of coprocessors, each of the coprocessors coupled to the central processing unit and the memory unit, for accessing and processing the data words stored in the memory unit by one of a plurality of addressing modes under control of the coprocessor memory access instructions executed by the central processing unit, wherein

the coprocessor memory access instruction having an indicating field, wherein the indicating field of the coprocessor memory access instruction includes a coprocessor number field, for storing information about a specific coprocessor to be activated, and a coprocessor register field, for storing information about specific registers to be used, and a number of word data that needs to be transmitted is determined by the coprocessor number field and the coprocessor register field, and the coprocessor number field determines one of the coprocessors to be activated.

Claims 3-5. (Canceled)

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Claim 6. (Currently Amended) A coprocessor data access control method, comprising the steps of:

providing an instruction having an indicating field; and

accessing a memory unit by a specified coprocessor according to ~~[[the]]~~a value in the ~~coprocessor~~ indicating field,

wherein the indicating field of the ~~coprocessor memory access~~ instruction includes a coprocessor number field, for storing information about a specific coprocessor to be activated, and a coprocessor register field, for storing information about specific registers to be used, and a number of word data that needs to be transmitted is determined by the coprocessor number field and the coprocessor register field,

wherein, the coprocessor number field determines one of a plurality of coprocessors to be activated.

Claims 7-12. (Canceled)